

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 1-15 are pending. No claims are canceled or amended. Accordingly no new subject matter is added.

At page 2, the Office Action rejects claims 1-15 under 35 U.S.C. § 103 as unpatentable over U.S. Publication No. 2003/0083188 to Seto et al. At pages 2-3, the Office Action rejects claims 1, 2, and 4-15 under 35 U.S.C. § 103 as unpatentable over U.S. Patent No. RE37,514 to Sasage et al. Applicants respectfully traverse the rejections over the cited references.

Pending claim 1 recites a soda lime composition that includes specific ranges of 6 colorants and a very low TLA4 (total luminous transmittance through the composition measured at a thickness of 4 mm) of less than 20% and a low energetic transmittance, TE4 (Moon) of less than 20%.

The Office Action recognizes that none of the exemplary compositions in Seto et al. satisfy the compositional limitations of claims 1-15. Page 2. However, the Office Action nonetheless concludes that overlapping ranges are primary facie obvious and that a glass with overlapping compositional ranges would have the properties recited in claims 1, 11, and 14. Applicants respectfully disagree that Seto et al. provides sufficient guidance to render obvious the composition of claim 1 having the properties recited.

Unlike claim 1, Seto et al. is directed towards a glass that may have a light transmittance as high as 65 or 70%. ¶¶ 0009, 0013. The focus of Seto et al. involves the inclusion of LiO₂ in the base glass composition to lower viscosity of the glass material, accelerate melt and homogenization of the glass material, and improve capacity for reinforcement. See, e.g., ¶ 0010. Seto et al. also mentions that it is possible to add at least one of a host of colorants in ¶¶ 0028 and 0029 as well as ¶¶ 0043 - 0048. These paragraphs

allow broad ranges for every colorant and ¶ 0035 further permits a wide range of iron content (0.7-2.2%). In addition, perhaps because of the focus on LiO_2 , Seto et al. provides insufficient guidance as to how achieve the less than 20% luminous and energetic transmittance within the colorant ranges recited in claim 1. As explained in the present specification, for example at page 4, lines 22-26, and page 6, lines 12-15, the interactions of multiple colorants with the redox state of the glass is quite complex. Stated differently, Seto et al. does not provide guidance as to what compositions achieve less than 20% luminous and energetic transmittance. Indeed, to the extent that such properties are obtained in the examples of Seto et al., they are achieved with different compositions than those claimed, particularly ones including LiO_2 and having no chromium. See, e.g., Examples 1, 2, and 4. At the same time, the lone example using chromium, Example 3, has a cobalt content below that recited in claim 1 and a luminous transmission of 37.8%, far above that permitted in claim 1. Accordingly, Applicants submit that a person of ordinary skill in the art cannot reasonably expect from the disclosure of Seto et al. that the particular range of colorants as recited in the present claim 1 will have the properties recited. For these reasons, Seto et al. neither discloses nor suggests the features of claim 1, or in dependent claims 2-15 which depend on claim 1.

The Office Action further asserts that Sasage et al. renders claims 1-2 and 4-15 unpatentable. In making the rejection, the Office Action also recognizes that Sasage et al. includes no examples or compositional ranges that are sufficiently specific to anticipate the compositions of claims 1-15. However, the Office Action asserts that overlapping ranges establish a prima facie case of obviousness and that it would have been obvious for a person of ordinary skill to select overlapping portions of the ranges and expect that a glass would have the recited properties.

Applicants respectfully traverse the rejection over Sasage et al. As the Office Action appears to recognize by the not rejecting claim 3 over Sasage et al., Sasage et al. substantially differs from the present invention with respect to the permissible range of cobalt.

Specifically, present claim 1 permits 150-200 ppm of cobalt. Sasage et al., however, states that "If the content of CoO is less than 0.02 part by weight ... the visible light transmittance tends to be too high... The content is preferably at most 0.03 part by weight ..." More generally, Sasage et al. teaches a CoO range of 0.02 to 0.05 % which is substantially above the range recited in claim 1. Thus, Sasage et al. teaches away from much of the cobalt range recited in claim 1. Turning to the examples, only Example 3 has approximately 0.02 % CoO. However, the total iron in this example (0.82%) is well below what is permitted in claim 1 (1.1-1.5%). Example 3 also has a REDOX percentage of 29.82, well above the range permitted in claim 5. For at least these reasons, Sasage et al. neither discloses nor suggests the feature in claim 1, or in dependent claims 2-15 which depend on claim 1.

For the reasons presented above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance for claims 1-15 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,

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